



RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 10/004,115
Source: OIPB
Date Processed by STIC: 8/12/0

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.
PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
 - 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY
- FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.
PATENTIN 2.1 e-mail help: patin21help@uspto.gov or phone 703-306-4119 (R. Wax)
PATENTIN 3.0 e-mail help: patin3help@uspto.gov or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER
VERSION 3.1 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND
TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:
<http://www.uspto.gov/web/offices/pac/checker>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail. Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom. Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<<http://www.uspto.gov/ebs/efs/downloads/documents.htm>> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: U.S. Patent and Trademark Office, Box Sequence, P.O. Box 2327, Arlington, VA 22202
3. Hand Carry directly to:
U.S. Patent and Trademark Office, Technology Center 1600, Reception Area, 7th Floor, Examiner Name,
Sequence Information, Crystal Mall One, 1911 South Clark Street, Arlington, VA 22202
Or
U.S. Patent and Trademark Office, Box Sequence, Customer Window, Lobby, Room 1B03, Crystal Plaza Two,
2011 South Clark Place, Arlington, VA 22202
4. Federal Express, United Parcel Service, or other delivery service to: U.S. Patent and Trademark Office,
Box Sequence, Room 1B03-Mailroom, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202

Revised 01/29/2002



OICE

RAW SEQUENCE LISTING

DATE: 08/12/2002

PATENT APPLICATION: US/10/004,115

TIME: 16:10:55

Input Set : A:\72249.txt

Output Set: N:\CRF4\08122002\J004115.raw

4 <110> APPLICANT: ASAKO, HIROYUKI
 5 MATSUMURA, KENJI
 6 SHIMIZU, MASATOSHI
 7 ITO, NOBUYA
 8 WAKITA, RYUHEI
 10 <120> TITLE OF INVENTION: PROCESS FOR PRODUCING OPTICALLY ACTIVE
 11 4-HALO-3-HYDROXYBUTANOATE
 14 <130> FILE REFERENCE: 72249
 16 <140> CURRENT APPLICATION NUMBER: US 10/004,115
 C--> 17 <141> CURRENT FILING DATE: 2002-08-05
 19 <150> PRIOR APPLICATION NUMBER: JP 2000-372704
 20 <151> PRIOR FILING DATE: 2000-12-07
 22 <150> PRIOR APPLICATION NUMBER: JP 2001-006144
 23 <151> PRIOR FILING DATE: 2001-01-15
 25 <150> PRIOR APPLICATION NUMBER: JP 2001-026594
 26 <151> PRIOR FILING DATE: 2001-02-02
 28 <150> PRIOR APPLICATION NUMBER: JP 2001-175175
 29 <151> PRIOR FILING DATE: 2001-06-11
 31 <160> NUMBER OF SEQ ID NOS: 33
 33 <170> SOFTWARE: FastSEQ for Windows Version 3.0

ERRORED SEQUENCES

203 <210> SEQ ID NO: 6
 204 <211> LENGTH: 14
 205 <212> TYPE: PRT
 206 <213> ORGANISM: PENICILLIUM CITRINUM
 208 <400> SEQUENCE: 6
 E--> 209 Tyr Glu Asp Val Leu Xaa Xaa Ile Asp Asp Ser Leu Lys Arg
 210 1 5 10
 E--> 212 <210> SEQ ID NO: 8 } skipped sequence - seq. 3
 296 <210> SEQ ID NO: 15
 297 <211> LENGTH: 697
 298 <212> TYPE: DNA
 299 <213> ORGANISM: ESCHERICHIA COLI
 301 <400> SEQUENCE: 15
 E--> 302 cgctctaaaa ctantggatc ccccgggctg caggaattcg gcggcggcgg atccaacgga 60
 E--> 303 aanactttca cactgagcaa cgcgctcaaa attcctggcg tcggcttttg tacctncgct 120
 E--> 304 agtgaagggtt ccaagggcga aacctatnct gctgtcacca ctgccctgaa aaccgggttac 180
 E--> 305 cgtnctttgg actgtgacctg gtactacctg aacaaggggtg aggttggtga gggntntccgt 240
 306 gacttctctga aggaaaaccc ctcggtgaag cgtgaggaca tcttcgtctg caccaagggtg 300
 E--> 307 tggaaaccacc tccaccgtta tgaggacgct ctctggtcca ttgacnactc cctgaagcgt 360

Xaa in sequence
See p. 4
n in sequence

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/004,115

DATE: 08/12/2002
TIME: 16:10:55

Input Set : A:\72249.txt

Output Set: N:\CRF4\08122002\J004115.raw

```

308 cttggacttg actacgttga tatgttcttc gttcactggc ccattgctgc cgaaaaaaat 420
E--> 309 ggccagggtg agcccaaaat tggccctgac ggcaaatacn tcntttctcaa ggacctgacc 480
E--> 310 gaaanccena ncccacctgg cgcgctatgg aaaaaatttn tgangatccc aaggccaggt 540
E--> 311 ccattggtgt ttccaattgg accattgccg accttgagaa gatgtccaag ttngccaagg 600
E--> 312 tnatgectca cgccaaccag atcgagattc accccttctt gcccaacgag gagctggtgc 660
E--> 313 agtactgctt ttccaagaac antatgcccg tagcgta 697
340 <210> SEQ ID NO: 18
341 <211> LENGTH: 331
342 <212> TYPE: DNA
343 <213> ORGANISM: ESCHERICHIA COLI
345 <400> SEQUENCE: 18
E--> 346 cgctctaaaa ctantggatc ccccgggctg caggaattcg gcggccgcgg atccttctac 60
347 cccatcatgt ctaacggaaa gactttcaca ttgagcaacg gcgtcaagat tcttggcgtc 120
348 ggctttggta ccttcgctag tgaaggttcc aagggcgaga cctatactgc tgtcaccact 180
349 gccctgaaga cgggttaccg tcacttggac tgtgcctggt actacctgaa cgagggtgag 240
350 gttggtgagg gtatccgtga cttctgaag gagaaccctt cgggtgaagcg tgaggacatc 300
351 ttctgttgc ccaaggtgtg gaaccacctc c 331
353 <210> SEQ ID NO: 19
354 <211> LENGTH: 743
355 <212> TYPE: DNA
356 <213> ORGANISM: ESCHERICHIA COLI
358 <400> SEQUENCE: 19
359 caaccagatc gagattcacc ccttctctgc caacgaggag ctggtgcagt actgcttctc 60
360 caagaacatt atgcccgtgg cctactctcc tctgggctcg cagaaccagg ttcccaccac 120
361 cgggtgagcg gtcagcgaga acaagactct gaacgagatc gccgagaagg gcggcaacac 180
362 ccttgctcag gttcttattg cctggggtct gcgcctggc tacgtcttcc tccccaagag 240
363 ctccaacccc aagcgcattg agtccaactt caagagcatt gagctctccg atgccgactt 300
364 tgaagccatc aatgccgttg ccaagggctg tcaactccgt ttogtcaaca tgaaggatac 360
365 ttctggatat gatgtctggc ccgaggagac cgccaagaac ctgtctgcgt gaatctctac 420
E--> 366 gaaattataa aatnacaccn acnaaaancc aaagcganag gatgatnccc aaaanttttg 480
E--> 367 agggtttctt ggttgaaaac gtttantgan cccgaantga angaatagat gancntgatt 540
E--> 368 tctccaaaaa aaaaaaaaaa aaaaacggtc cgcggccgct ccnngggggg gcccggttcc 600
E--> 369 caattcnccc cttatnattg aattcttttt taanggggnc aaattccncc nnatttccnt 660
E--> 370 cnanattggn nggcgcctc caaactttcn tcntnaaagg gncccaattc cccccnatt 720
E--> 371 aantggantt cctntttacc ttt 743
E--> 657 <210> SEQ ID NO: 32

```

res in sequence
See p. 4

} See p. 3 - shipped sequence

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/10/004,115

DATE: 08/12/2002
TIME: 16:10:56

Input Set : A:\72249.txt
Output Set: N:\CRF4\08122002\J004115.raw

Skipped Sequences(NEW RULES):

Sequence(s)___missing. If intentional, please use the following format for each skipped sequence.

<210> sequence id number

<400> sequence id number

000

Seq#:7,31

VARIABLE LOCATION SUMMARY

DATE: 08/12/2002

PATENT APPLICATION: US/10/004,115

TIME: 16:10:56

Input Set : A:\72249.txt

Output Set: N:\CRF4\08122002\J004115.raw

Use of n's or Xaa's(NEW RULES):

Use of n's and/or Xaa's have been detected in the Sequence Listing.

Use of <220> to <223> is MANDATORY if n's or Xaa's are present.

in <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.

Seq#:6; Xaa Pos. 6,7

Seq#:9; N Pos. 3,6,9

Seq#:10; N Pos. 3,6,9

Seq#:11; N Pos. 3,6,9

Seq#:12; N Pos. 3,6,9

Seq#:13; N Pos. 3,6,9

Seq#:14; N Pos. 3,6,9

Seq#:15; N Pos. 14,63,116,148,185,235,346,460,463,485,489,491,520,524,593

Seq#:15; N Pos. 602,682

Seq#:18; N Pos. 14

Seq#:19; N Pos. 434,440,443,448,458,467,475,506,510,517,522,533,535,583,584

Seq#:19; N Pos. 607,616,634,639,648,651,652,659,662,664,670,671,690,693,695

Seq#:19; N Pos. 702,717,723,728,734

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/004,115

DATE: 08/12/2002

TIME: 16:10:56

Input Set : A:\72249.txt

Output Set: N:\CRF4\08122002\J004115.raw

L:17 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:39 M:282 W: Numeric Field Identifier Missing, <212> is required.
L:201 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (5) SEQUENCE:
L:209 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:6
L:212 M:214 E: (33) Seq.# missing, SEQ ID NO:7
L:234 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:9
L:234 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:9
L:234 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:0
L:246 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:10
L:246 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:10
L:246 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:0
L:258 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:11
L:258 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:11
L:258 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11 after pos.:0
L:270 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:12
L:270 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:12
L:270 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 after pos.:0
L:282 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:13
L:282 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:13
L:282 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 after pos.:0
L:294 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:14
L:294 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:14
L:294 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14 after pos.:0
L:302 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:15
M:340 Repeated in SeqNo=15
L:346 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:18
L:366 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:19
M:340 Repeated in SeqNo=19
L:657 M:214 E: (33) Seq.# missing, SEQ ID NO:31